Attorney Docket No.: 03678.0023.CNUS03

In the Claims

1. (Currently Amended) A method of enhancing drainage of the lacrimal system comprising the step of administering to the eyes of a subject an effective amount of a preparation comprising a compound selected from the group consisting of uridine 5'-triphosphate and derivatives as depicted in Formula I, dinucleoside polyphosphaces polyphosphate as depicted in Formula II, II(a) and II(b), adenosine 5'-triphosphate derivatives as depicted in Formula III, and cytidine 5'-triphosphate derivatives as depicted in Formula IV, and or their pharmaceutically acceptable salts;

whereby said preparation enhances is effective in enhancing drainage of the lacrimal system in the eyes in the subject:

Formula I

wherein:

X₁, X₂ and X₃ are each independently either O or S;

R₁ is O, imido, methylene or dihalomethylene;

R2 is H or Br;

Attorney Docket No.: 03678.0023.CNUS03

FORMULA II

wherein:

X is oxygen, imido, methylene or difluoromethylene;

$$n = 0 \text{ or } 1;$$

$$m = 0 \text{ or } 1;$$

$$n + m = 0$$
, 1 or 2; and

B and B' are each independently a purine residue, as in Formula IIa, or a pyrimidine residue, as in Formula IIb, linked through the 9- or 1-position, respectively:

Formula IIa

$$R_{3} \xrightarrow{\begin{array}{c} 7 \\ N \\ N \\ N \\ N \\ H \end{array}} \xrightarrow{\begin{array}{c} 7 \\ 6 \\ 1 \\ N \\ N \\ 3 \end{array}} R_{2}$$

$$R_{2} \xrightarrow{\begin{array}{c} 8 \\ 9 \\ N \\ N \\ 3 \end{array}} H \text{ or CI}$$

Attorney Docket No.: 03678.0023.CNUS03

wherein:

 R_3 is H or NHR₁;

 R_1 of the 6- or 8-HNR₁ groups is ehosen selected from the group consisting of hydrogen, arylalkyl (C_{1-6}) groups; and alkyl groups with functional groups selected from the group consisting of [6-aminohexyl]carbamoylmethyl-, and ω -acylated-amino, hydroxy, thiol or carboxy derivatives, where the acyl group is ehosen selected from the group consisting of acetyl, trifluroacetyl, benzoyl, and substituted-benzoyl;

Formula IIb

$$R_7$$
 R_6
 R_5
 R_8
 R_8
 R_8
 R_8
 R_8
 R_8

wherein:

 R_4 is hydroxy, mercapto, amino, cyano, aralkoxy, C_{1-6} alkoxy, C_{1-6} alkylamino or dialkylamino, with the alkyl groups optionally linked to form a heterocycle;

R₅ is hydrogen, acyl, C₁₋₆ alkyl, aroyl, C₁₋₅ alkanoyl, benzoyl, or sulphonate;

 R_6 is hydroxy, mercapto, alkoxy, aralkoxy, C_{1-6} -alkylthio, C_{1-5} disubstituted amino, triazolyl, alkylamino or dialkylamino, where the alkyl groups are optionally linked to form a heterocycle or linked to N^3 to form an optionally substituted ring;

R₇ is hydrogen, hydroxy, cyano, nitro, alkenyl with the alkenyl moiety optionally linked through oxygen to form a ring optionally substituted on the carbon adjacent to the oxygen with

Attorney Docket No.: 03678.0023.CNUS03

alkyl or aryl groups, substituted alkynyl, halogen, alkyl, substituted alkyl, perhalomethyl, C_{2-6} alkyl, C_{2-3} alkenyl, or substituted ethenyl, C_{2-3} alkynyl or substituted alkynyl;

or together $R_6 - R_7$ form a 5 or 6-membered saturated or unsaturated ring bonded through N or O at R_6 , such a ring optionally contains substituents that themselves contain functionalities; provided that when R_8 is amino or substituted amino, R_7 is hydrogen; and

R₈ is hydrogen, alkoxy, arylalkoxy, alkylthio, arylalkylthio, carboxamidomethyl, carboxymethyl, methoxy, methylthio, phenoxy or phenylthio[;].

Formula III

wherein:

R₁, X₁, X₂ and X₃ are defined as in Formula I;

 R_3 and R_4 are H while R_2 is nothing and there is a double bond between N-1 and C 6, or R_3 and R_4 are H while R_2 is O and there is a double bond between N-1 and C-6, or

R₃, R₄ and R₂ taken together are CH-CH-, forming a ring from N-6 to N-1 with a double bond between N-6 and C-6;

Attorney Docket No.: 03678.0023.CNUS03

Formula IV

wherein:

R₁, X₁, X₂ and X₃ are defined as in Formula I;

 R_5 and R_6 are H while R_7 is nothing and there is a double bond between N-3 and C-4, or R_5 , R_6 and R_7 taken together are -CH-CH, forming a ring from N-3 to N-4 with a double bond between N-4 and C-4 optionally substituted at the 4- or 5-position of the etheno ring.

- 2. (Original) The method according to Claim 1, wherein said method treats nasolacrimal duct obstruction.
- 3. (Withdrawn) The method according to Claim 1, wherein said compound is a compound of Formula I.
- 4. (Original) The method according to Claim 1, wherein said compound is a compound of Formula II.
- 5. (Withdrawn) The method according to Claim 1, wherein said compound is a compound of Formula III.
- 6. (Withdrawn) The method according to Claim 1, wherein said compound is a compound of Formula IV.
- 7. (Currently Amended) The method according to Claim 1, wherein said administration involves topical administration of said compound via a carrier vehicle selected

Attorney Docket No.: 03678.0023.CNUS03

from [[a]] the group consisting of drops of liquid, liquid wash, gels, ointments, sprays and liposomes.

- 8. (Currently Amended) The method according to Claim 7, wherein said topical administration comprises infusion of said compound to said ocular surface via a device selected from [[a]] the group consisting of a pump-catheter system, a continuous or selective release device, and a contact lens.
- 9. (Currently Amended) The method according to Claim 1, wherein said administration involves systemic administration of said compound by systemically administering a liquid or liquid suspension of said compound via nose drops, nasal spray, or nebulized liquid to oral or nasopharyngeal airways of said subject, such that a therapeutically effective amount of said compound contacts the lacrimal tissues eyes of said subject via systemic absorption and circulation.
- 10. (Currently Amended) The method according to Claim 1, wherein said systemic administration of said compound is accomplished by involves systemically administering an oral form of said compound, such that a therapeutically effective amount of said compound contacts the lacrimal tissues eyes of said subject via systemic absorption and circulation.
- 11. (Currently Amended) The method according to Claim 9, wherein said systemic administration of said compound is accomplished by involves systemically administering an injectable form of said compound, such that a therapeutically effective amount of said compound contacts the lacrimal tissues eyes of said subject via systemic absorption and circulation.
- 12. (Currently Amended) The method according to Claim 9, wherein said systemic administration of said compound is accomplished by involves systemically administering a suppository form of said compound, such that a therapeutically effective amount of said compound contacts the lacrimal tissues eyes of said subject via systemic absorption and circulation.
- 13. (Currently Amended) The method according to Claim 9, wherein said systemic administration of said compound is accomplished by involves systemically administering an

Attorney Docket No.: 03678.0023.CNUS03

intra-operative instillation of a gel, cream, powder, foam, crystals, liposomes, spray or liquid suspension form of said compound, such that a therapeutically effective amount of said compound contacts the lacrimal tissues eyes of said subject via systemic absorption and circulation.

- 14. (Original) The method according to Claim 1, wherein said compound is administered in an amount sufficient to achieve concentrations thereof on the ocular surfaces of said subject of from about 10⁻⁷ to about 10⁻¹ moles/liter.
- 15. (Currently Amended) A method of enhancing drainage of the lacrimal system in eyes comprising the step of administering to the eyes an effective <u>drainage-enhancing</u> amount of P¹, P⁴-di(uridine-5')-tetraphosphate.